

2007-08

## SINGLE-PHASE GLASS PASSIVATED MINI SUPER FAST SURFACE MOUNT BRIDGE RECTIFIER VOLTAGE RANGE 50 to 200 Volts CURRENT 0.5 Ampere

## FEATURES

- \* Surge overload rating 20 amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction utilizing molded
- \* Glass passivated device
- \* Polarity symbols molded on body
- \* Mounting position: Any
- \* Weight: 0.5 gram

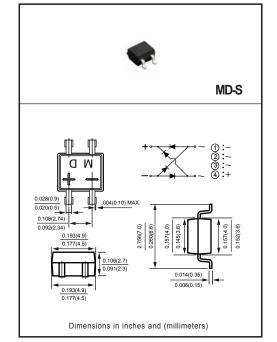
### **MECHANICAL DATA**

\* Epoxy: Device has UL flammability classification 94V-O

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.



#### **MAXIMUM RATINGS** (At $T_A = 25^{\circ}C$ unless otherwise noted)

For capacitive load, derate current by 20%.

RATINGS	SYMBOL	EMD1S	EMD2S	EMD3S	EMD4S	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	105	140	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	Volts
Maximum Average Forward Output Current at T_A =30°C -on glass-epoxy P.C.B. (Note 2) -on aluminum substrate (Note 3)	Ι <sub>ο</sub>	0.5 0.8				
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	20				Amps
Typical Junction Capacitance (Note 4)	CJ	15			pF	
Operating and Storage Temperature Range	TJ,TSTG	-55 to + 150			٥C	

ELECTRICAL CHARACTERISTICS (At T<sub>A</sub> = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	EMD1S	EMD2S	EMD3S	EMD4S	UNITS
Maximum Forward Voltage Drop per Bridge Element at 0.5A DC		VF	1.05				Volts
DC Blocking Voltage per element	@T <sub>A</sub> = 125°C	IR IR	0.5				mAmps
Maximum Reverse Recovery Time (Note 5)		trr	50				nS

Note: 1."Fully ROHS compliant","100% Sn plating(Pb-free).

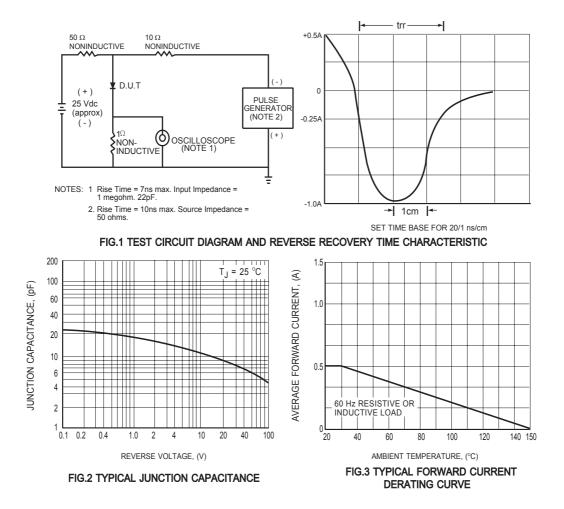
2. On glass-epoxy P.C.B. mounted on 0.05 X 0.05" (1.3 X 1.3mm) pads.

3. On aluminum substrate P.C.B. with an area of 0.8 X 0.8 X 0.25" (20 X 20 X 6.4mm) mounted on 0.05 X 0.05" (1.27 X 1.27mm) solder pad.

4. Measure at 1MHz and applied reverse voltage of 4.0 volts.

5. Test Condition :  $I_F=0.5A$ ,  $I_R=-1.0A$ ,  $I_{RR}=-0.25A$ .

# RATING AND CHARACTERISTICS CURVES (EMD1S THRU EMD4S)



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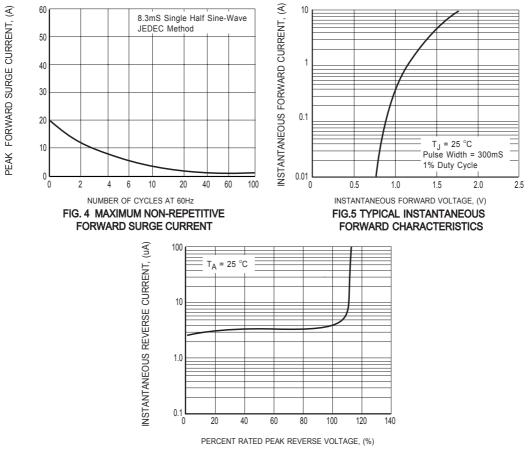
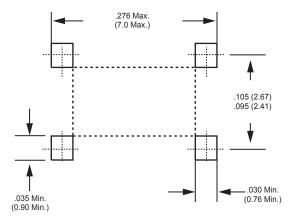


FIG.6 TYPICAL REVERSE CHARACTERISTICS

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# Mounting Pad Layout



Dimensions in inches and (millimeters)



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